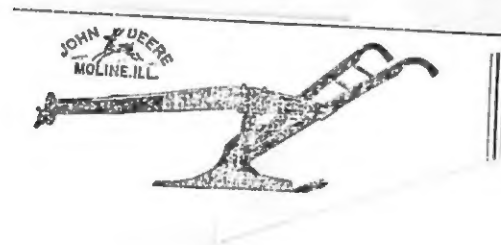
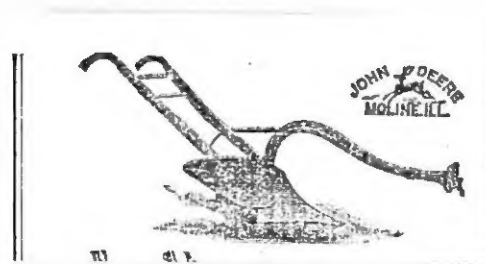


One of  
The  
First  
Plows  
Used for  
Irrigation

It takes a strong team of horses to pull a plow that will throw a twenty-eight inch furrow, yet some of those first Utah-made plows did throw a furrow that deep; however, they were usually pulled by three or more yoke of oxen. One of the first plows was used to plow the first ditches for irrigation in Utah.



This plow was made February, 1859. The metal came from the braces and tires of discarded equipment brought west by Johnston's Army. It was formed and beaten into shape by James Fickle in the blacksmith shop of James Gordon in Cottonwood (now Murray) on State Street with Samuel S. Howard (Nora Olson's father) as helper. A maple wood beam was put on by James Carruth. The plow with the beam cost \$45.00. The beam came from Cottonwood Canyon. This plow was used in ditches in Sugar House, Mill Creek, Cottonwood, Union, Sandy and on the west side of the river for irrigation purposes.



For many years it remained at the home of Reuben Gardner, in front of his chicken coop, almost covered with weeds and rubbish. One day he dug it out, recounted its history and gave it to John C. Richards as a relic of the past. Mr. Richards took the plow to his home where it remained until the monument on the hill near the rock meeting house was built, then he turned it over to the D. U. P. It was placed in the monument enclosure and was later stolen, probably for the metal it contained.



Spring plowing and sea gulls

Photo — courtesy Joseph Gill



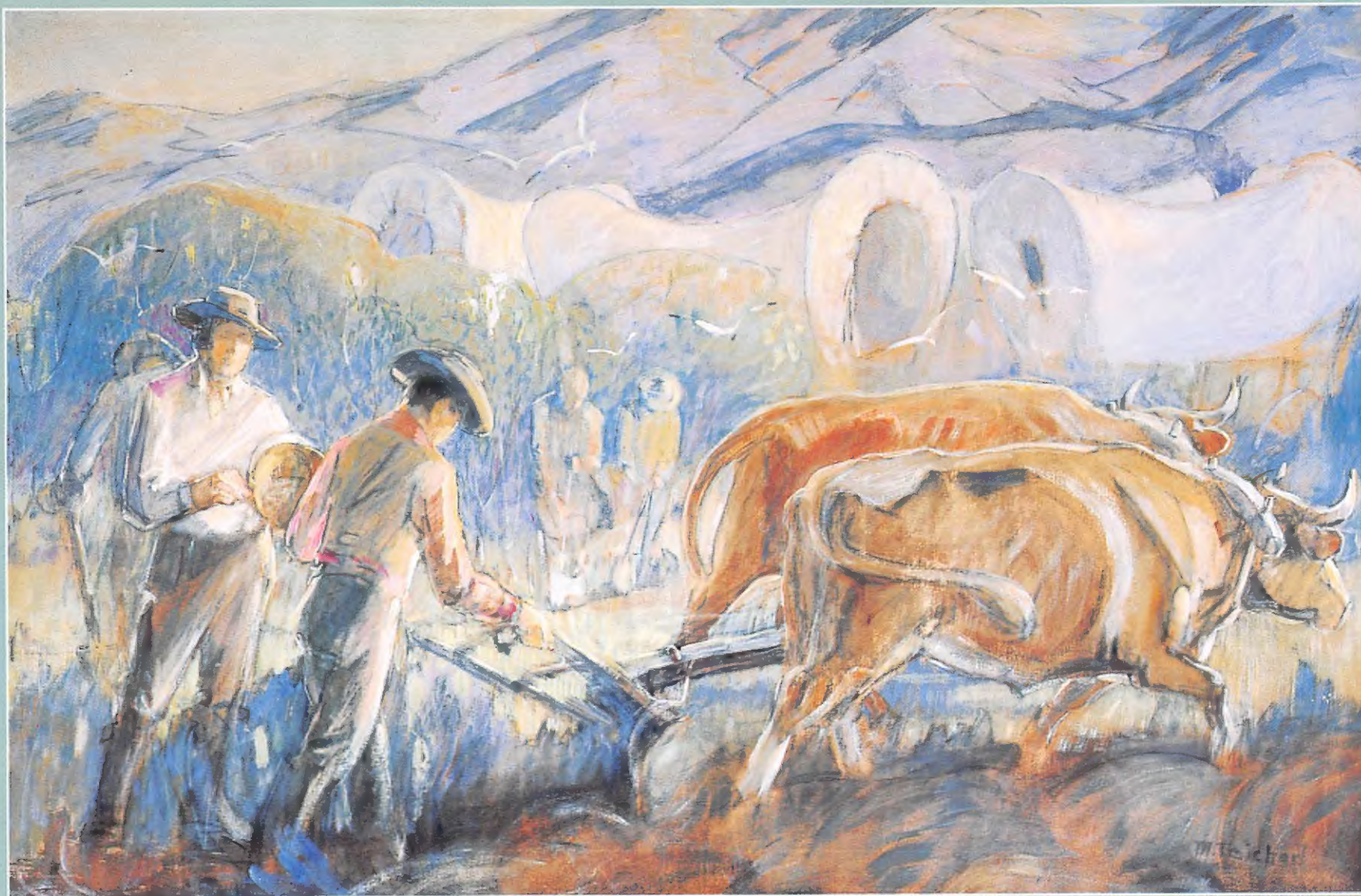
live in villages and not on their farms. We stop sometimes at Korean inns, where we sleep on the brick floors, half baked by the straw fires beneath us. Sometimes we stay with the magistrates, who, on our departure, as a mark of honor furnish us with trumpeters to toot us out of the town.

At last we reach the fine harbor known as Gensan. Here we board a Japanese steamer on its way from Nagasaki to Vladivostok (vlä-dē-vōs-tōk'), and after a few days' sail northward we find ourselves at anchor in the Gulf of St. Peter the Great, with the largest seaport of Siberia lying before us.



Plowing in Korea.





*First Plowing*, by Minerva Teichert.





LDS CHURCH COLLECTION, MUSEUM OF CHURCH HISTORY AND ART

*First Plowing and Planting, 1938, illustrates Minerva's ability to render both human and animal anatomy and shows her respect for those who are close to the land.*



A farmer plows his fields in the Oaxaca Valley in Mexico. How is this man's method of farming different from methods used on many large farms in the United States today?



The photograph below should help you to recall parts of the chapter you have just read. What is the main idea of the photograph?



Plowing  
Oxen  
Cows  
Horses  
Tractors





Farmers who cultivate their fields with old methods often raise scarcely enough food to feed their families.



This Iranian farmer tills the soil in the way of his forefathers. Economic development plans aim to replace the old wooden plough and the two tired donkeys with modern agricultural equipment. In what ways can farmers such as this one benefit from such change?



This Indian farmer rides a steel plow pulled by bullocks. In what ways is he mixing the old with the new?



## First in the West:

# History of First Utah Plow Told

(Submitted by Clara B. Richards)

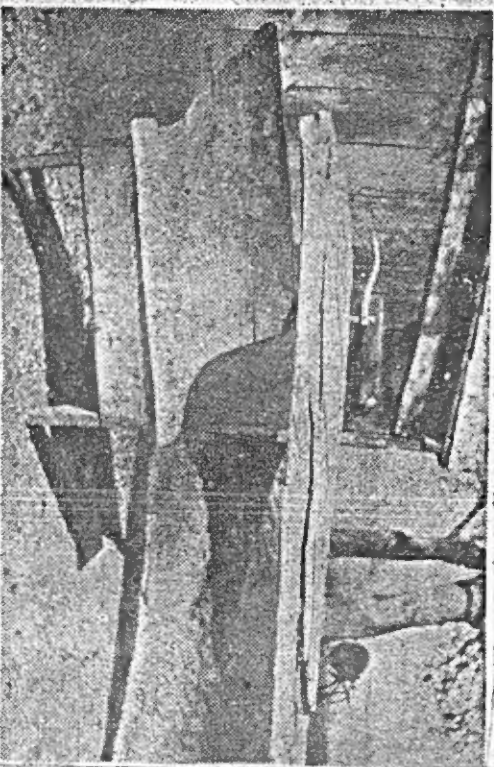
It takes a strong team of horses to pull a plow that will throw a 28-inch furrow, yet some of the first Utah-made plows did throw a furrow that deep. However, they were usually pulled by three or more yoke of oxen. Accompanying this article is a picture of one of the first plows made in Utah, the metal coming from the braces and tires of discarded equipment brought west by Johnston's Army. It was formed and beaten into shape by James Fickle in the blacksmith shop of James Gordon in Cottonwood on State St. Mr. Fickle was aided by Samuel S. Howard.

*Pioneer*  
The early pioneers made good use of all available material, and since the iron was necessary in manufacturing a plow, abandoned wagons, etc., were readily used supplies.

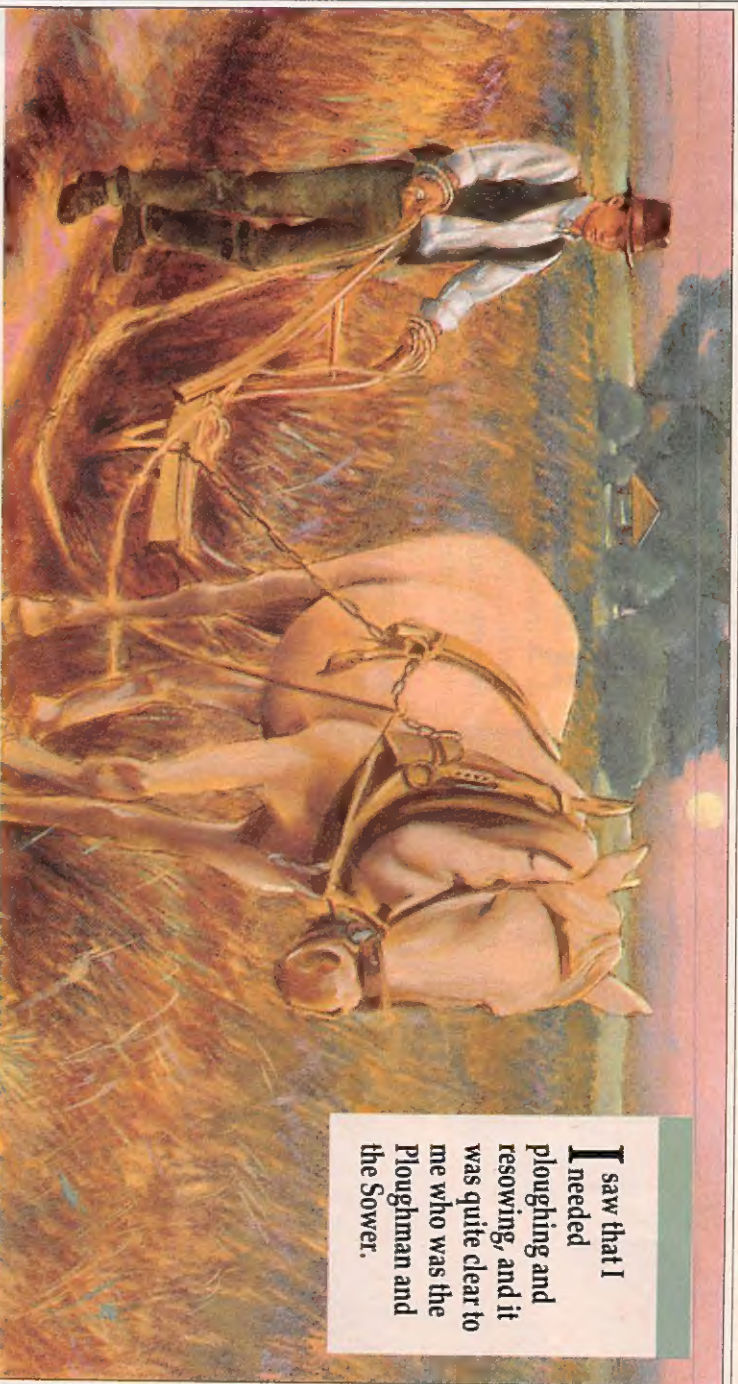
The beam of this plow was reputedly made from Big Cottonwood Canyon mahogany by James Carrouth.

This plow was used and owned by Archibald Gardner, famous pioneer mill builder, who had directed the construction of 36 mills before his death. It was very likely used in the making of irrigation ditches in Sugar House, Mill Creek, Cottonwood, Union, Sandy and of a certainty was used in the West Jordan district.

The plow is now on display just west of the West Jordan flour mill on the Bingham Highway. It is owned by the Gardner camp of the Daughters of Utah Pioneers. It is easily understood why the early pioneers broke many a plow in the soil of the Salt Lake Valley if every plow threw as deep a furrow and soil was as hard as the proverbial rocks surrounding the valley.



**WAR IMPLEMENTS INTO PLOW SHARES**—From discarded tires and braces on Army equipment abandoned by the Johnston Army, many of Utah's early plows were made. They were very important to an agricultural people depending upon the deep ditches for irrigation and plowed ground for planting. The above plow was one made from Johnston Army tires and braces.



I saw that I needed ploughing and resowing, and it was quite clear to me who was the Ploughman and the Sower.

ILLUSTRATED BY STEPHEN MOORE



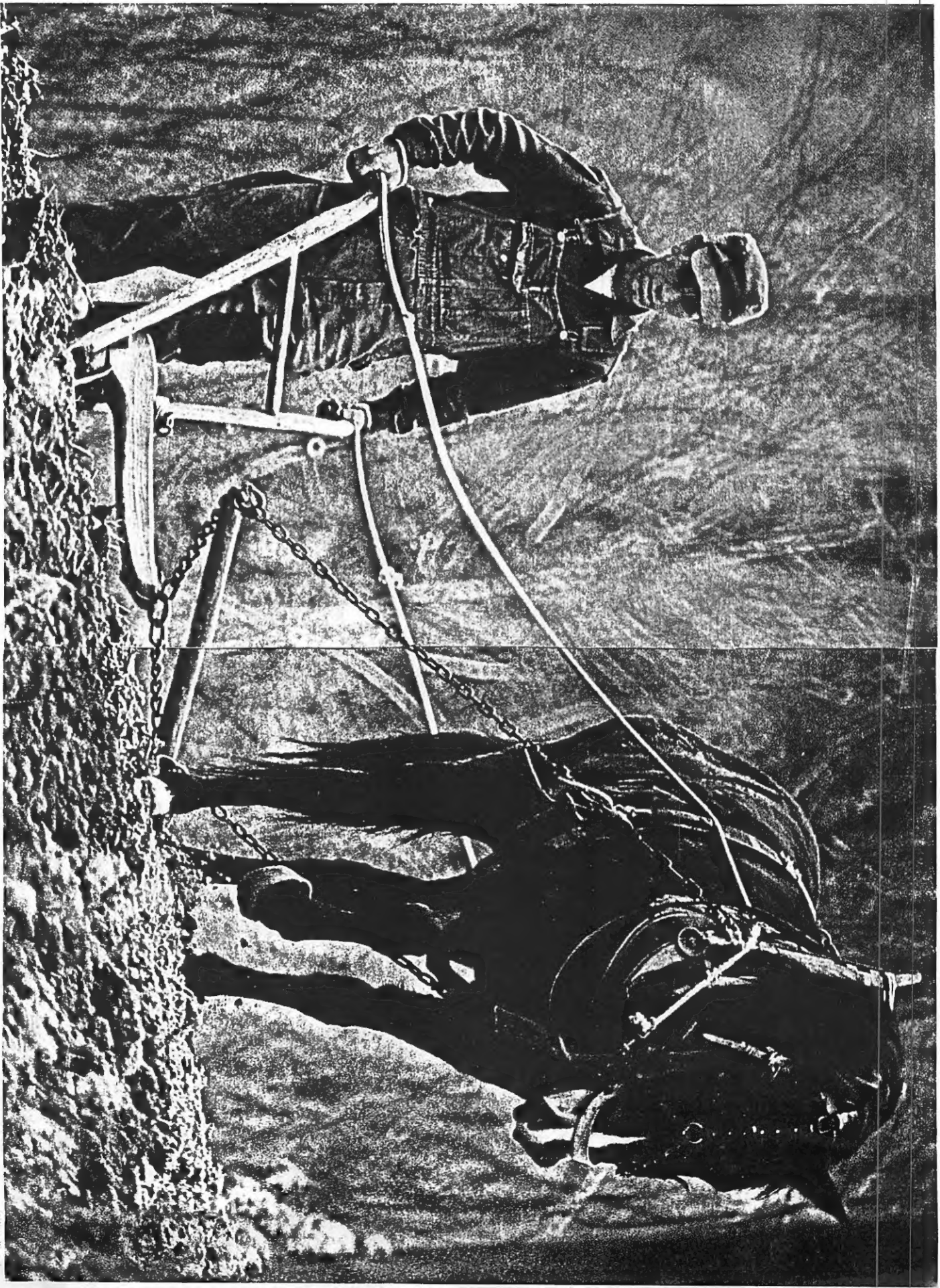
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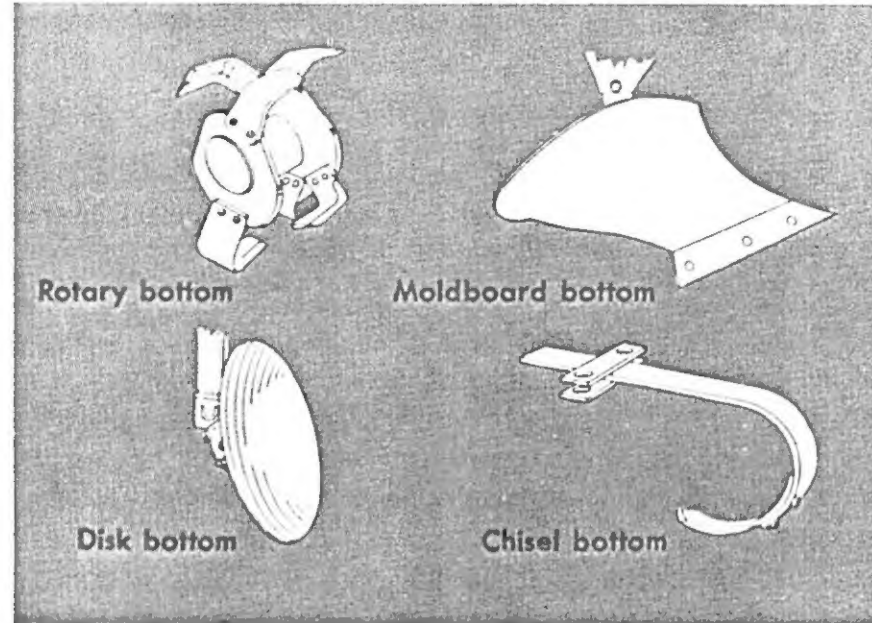


**THREESOME.** For some reason, when I look at this picture I can almost hear the "sounds" that accompany it—the rhythm of the horses stepping out up front, the soil creaking as the plow turns it over. There were quiet, peaceful times in the field before noisy tractors took over. There was almost a camaraderie between a man and his team—in fact, they worked together so closely you could almost describe this as the "team of four".



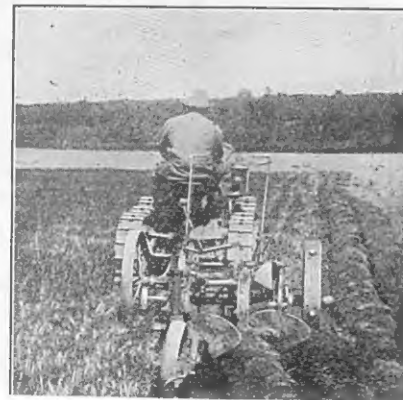






WORLD BOOK Illustration

A Tractor Plow with seven moldboard bottoms, left, can turn seven furrows at a time. The moldboard is the most widely used of the four main types of plow bottoms shown above. The kind of soil to be plowed helps determine the type of bottom used.



The **Tractor Plow** is pulled by a tractor. This type of plow has from 1 to 10 or more *bottoms* (furrowing spades) mounted on its frame. *Colters* (disk blades) can also be mounted on the frame to cut residue.

The **Walking Plow** is pulled by horses, mules, or oxen. The plowman must walk behind and hold the handles to keep the plow from falling over sideways.

The **Sulky Plow** has a seat and wheels, and so the farmer can ride as he tills. Horses pull the sulky plow, which was invented in 1875 by John Deere, an Illinois blacksmith.

The **Gang Plow**, a horse- or tractor-drawn plow, also allows the plowman to ride while he tills. It has two or more bottoms and three wheels. A gang plow can till as many furrows at a time as it has bottoms. A walking plow and a sulky can till only one at a time.

#### Kinds of Plow Bottoms

Farmers also classify plows according to the types of bottoms they have. There are four main kinds of plow

bottoms: (1) the *moldboard*, (2) the *disk*, (3) the *chisel*, and (4) the *rotary*.

The **Moldboard Plow Bottom** ranks as the most widely used type. A moldboard plow *molds* (covers and buries residue) as it tills. The moldboard bottom has three main parts: (1) the *share*, (2) the *landside*, and (3) the *moldboard*. They are bolted onto a frame called the *frog*, which holds them together in the shape of a three-sided wedge.

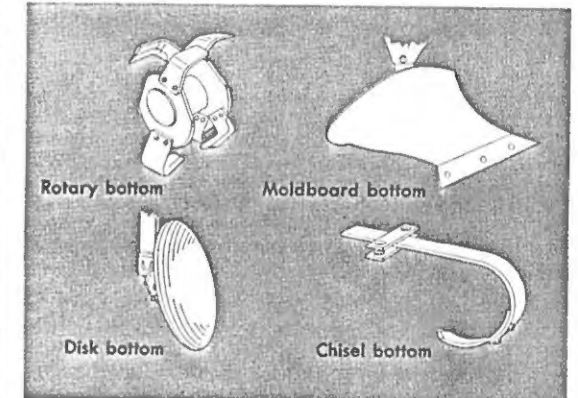
The *Share* is the cutting edge that tears the furrow slice loose from the ground. It uses most of the power required to pull the plow bottom through the soil.

The *Landside* fits behind the point of the share and below the moldboard. It slides along the land at the bottom of the furrow, where a slice of soil has been cut out, and steadies the plow.

The *Moldboard* is above and to the rear of the share. It turns the soil, breaks it up, and throws it to one side. Farmers use four types of moldboards. A *stubble* moldboard is short and sharply curved. It may be used for



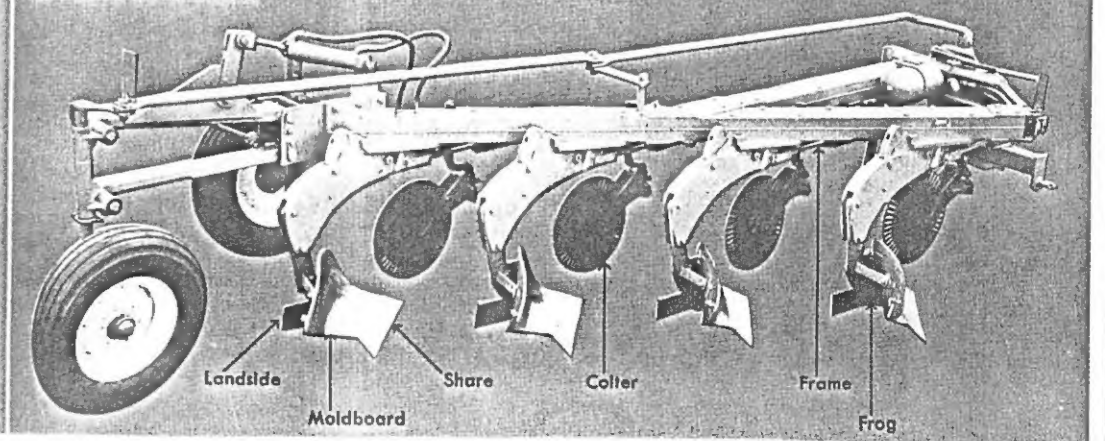
Ford Motor Company



WORLD BOOK Illustration

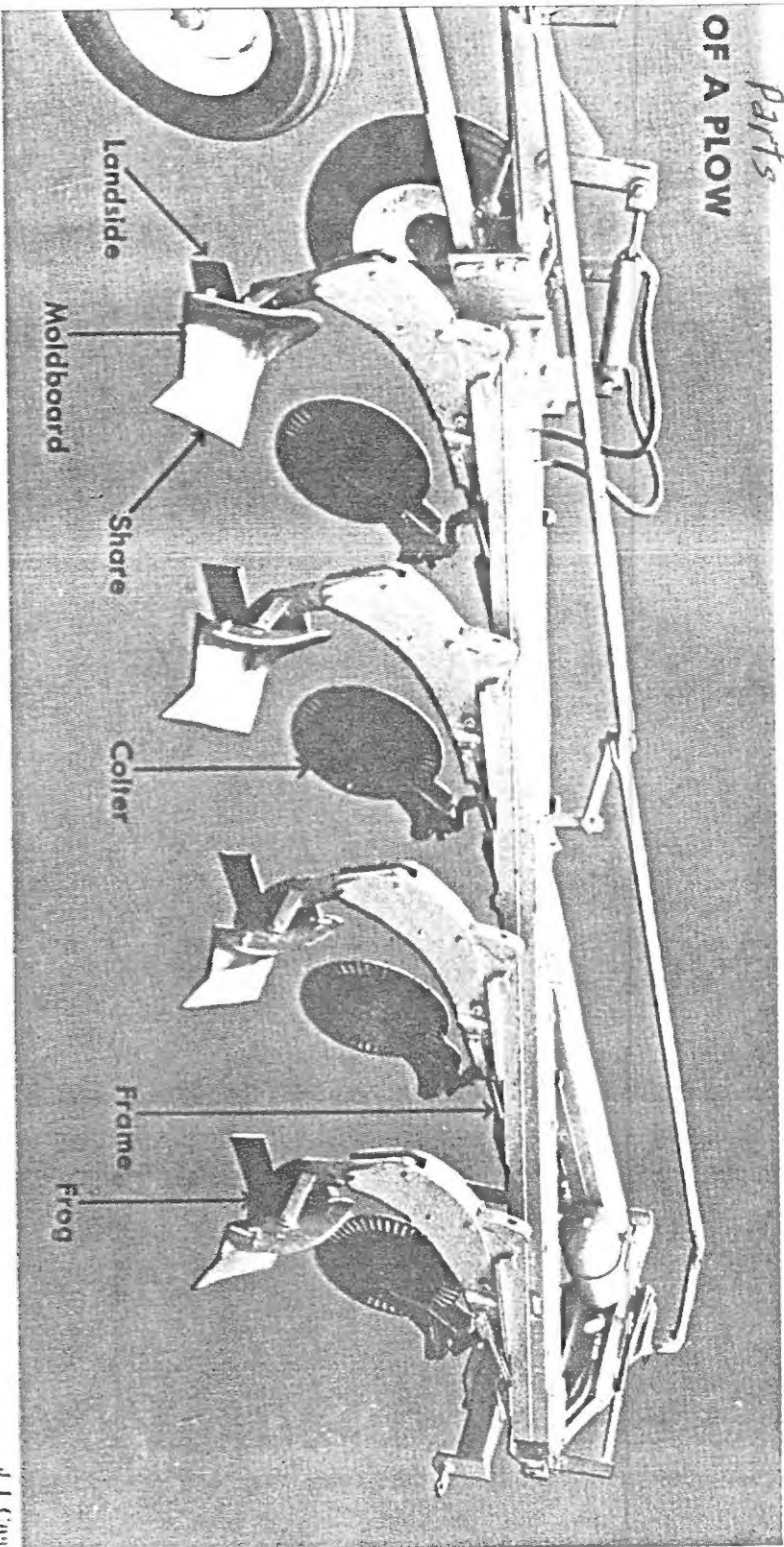
A Tractor Plow with seven moldboard bottoms, left, can turn seven furrows at a time. The moldboard is the most widely used of the four main types of plow bottoms shown above. The kind of soil to be plowed helps determine the type of bottom used.

#### THE PARTS OF A PLOW

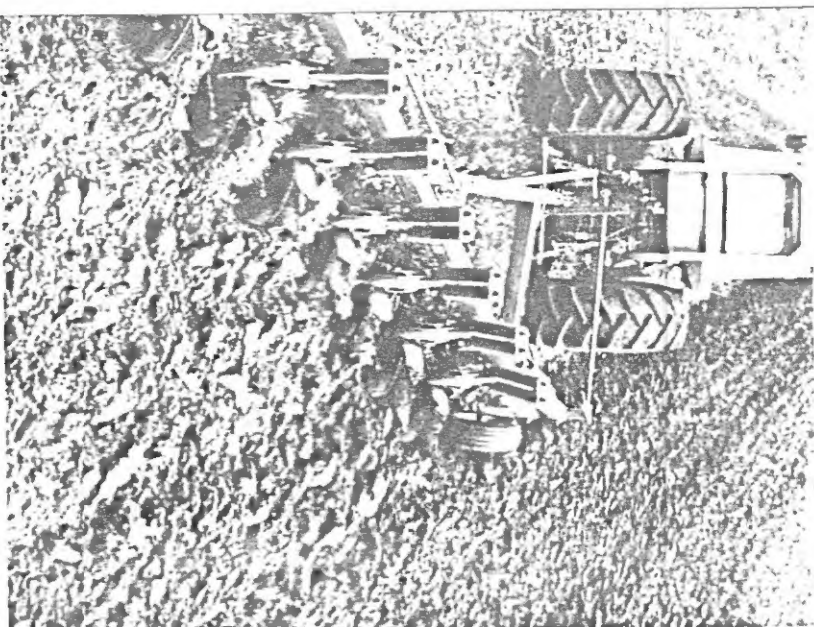




# *Parts* OF A PLOW



Model A Tractor



Ford Motor Company